

3743

PATENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of: )  
Goodson, et al. )  
Serial No.: 10/053,859 )  
Filed: January 19, 2002 )  
For: Electroosmotic Microchannel )  
Cooling System )

Group Art Unit: 3743

Docket No. S243 1020.1

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TECHNOLOGY CENTER H3700

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents  
Washington, D. C. 20231

Sir:

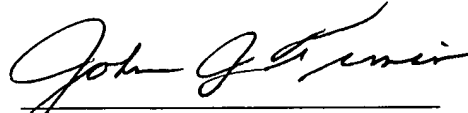
Applicant hereby voluntarily discloses the items listed on the attached Form PTO-1449 to the Assistant Commissioner for Patents. Copies of items A – AE are enclosed herewith.

Applicant further reserves the right to establish the patentability of the claimed invention over any of the listed information should they be applied as references, and/or to prove that some of the cited information may not be prior art, and/or to prove that some of the cited information may not be enabling for the teachings they purport to offer. This statement further should not be construed as a representation that an exhaustive search has been made, or that the information cited herewith is material, or that there does not exist information more material to the examination of the present Application. The Examiner is specifically requested not to rely solely on the information submitted herein. On the contrary, the Examiner is requested to conduct an independent and thorough review of the information, and to form independent opinions as to their significance.

It is respectfully requested that the Examiner initial and return copies of the enclosed PTO-1449 and to indicate in the official file wrapper of the above-identified patent application that each item of the cited information has been considered.

The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to account no. 09-0528.

Respectfully submitted,



John J. Timar


Registration No. 32,497

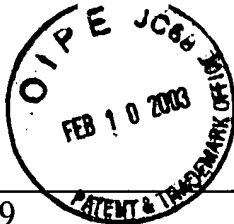
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Form PTO-1449  INFORMATION DISCLOSURE CITATION  (Use several sheets if necessary)	Attorney Docket No. S243 1020.2	Serial No. 10/272,048
	Applicant Zeng et al.	
	Filing Date 10/16/02	Group 3743

## U.S. PATENT DOCUMENTS

Examiner Initials	Item	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate

## FOREIGN PATENT DOCUMENTS

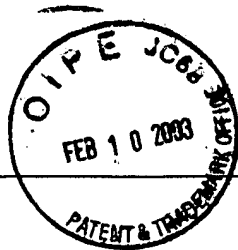
		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

	A	"Micro-heat exchangers". Weisberg, et al., American Society of Mechanical Engineers, Dynamic Systems and Control Division, DSC, 1990, v.19, p.159-17
	B	"Manufacturing and testing of compact micro heat exchangers with high volumetric heat transfer coefficients", Bier, et al.. American Society of Mechanical Engineers, Dynamic Systems and Control Division, DSC, 1990, v19, p.189-197
	C	"Design and fabrication of a cross flow micro heat exchanger". Harris et al., Journal of Microelectromechanical Systems; Dec 2000; v.9. no.4, p.502-508
	D	"Two-phase electronic cooling using mini-channel and micro-channel heat sinks: Part I design criteria and heat diffusion constraints", Bowers. et al., Transactions of the ASME. Dec 1994, v.116. p.290-297
	E	"Active control of electroosmotic flow in microchannels using light", Moorthy et al., Sensors and Actuators, B: Chemical; May 15, 2001; v.75, no.3, p.223-229

\* EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

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Form PTO-1449

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		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

	AA	"Irrotationality of uniform electroosmosis", Cummings et al., Proceedings of SPIE - International Society for Optical Engineering; 1999; v.3877, p.180-189
	AB	"Bibliography of liquid cooled heat sinks for thermal enhancement of electronic packages, Shaukatul I ah, IEEE Semiconductor Thermal Measurement and Management Symposium, 1999, p.231-245
	AC	"Transient temperature performance of an integrated micro-thermal system", Jiang, et al., Journal of Micromechanics and Microengineering, Sep. 2000, v.10, p.466-476
	AD	"Phase change in microchannel heat sinks with integrated temperature sensors", .Jiang. et al., Journal of Microelectromechanical Systems, 1999, v.8. no. 4, p.358-365
	AE	"Electroosmotic pumping and electrophoretic separations for miniaturized chemical analysis systems", Manz. et al., j. Micromech.. Microeng., 1994, p.257-265

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